

Message Text

LIMITED OFFICIAL USE

PAGE 01 NEW DE 05344 01 OF 03 061243Z
ACTION NEA-10

INFO OCT-01 ISO-00 NEAE-00 SSO-00 ONY-00 SS-15 /026 W
-----016215 061348Z /72R
O 061134Z APR 78
FM AMEMBASSY NEW DELHI
TO SECSTATE WASHDC IMMEDIATE 722

LIMITED OFFICIAL USE SECTION 1 OF 3 NEW DELHI 5344

E.O. 11652: N/A
TAGS: TECH, TBIO, TPHY, TATT, IN
SUBJECT: COUNTRY PAPER ON SCIENCE AND TECHNOLOGY IN INDIA

REF: STATE 83372

1. THERE FOLLOWS THE TEXT OF OUR PAPER ON SCIENCE AND TECHNOLOGY IN INDIA. WE WOULD URGE THAT IT BE SHARED WITH EMBASSY SCICOUNS TOM VREBALOVICH, WHO IS DUE IN THE DEPARTMENT (C/O OES - VIVIAN LANDIS) FOR CONSULTATIONS STARTING APRIL 5.

2. POLICY AND INSTITUTIONAL FRAMEWORK:

INDIA HAS LONG HAD A POLICY OF FOSTERING SCIENCE, DEVELOPING SCIENTIFIC MANPOWER, AND USING SCIENCE AND TECHNOLOGY FOR DEVELOPMENT. IT HAS BUILT UP THE THIRD LARGEST SCIENTIFIC ESTABLISHMENT IN THE WORLD. GOVERNMENT POLICY HAS RECOGNIZED THE NEED FOR EXTENSIVE FOREIGN COLLABORATION IN DEVELOPING INDIA'S SCIENTIFIC BASE BUT THERE WAS A STRONG POLITICAL COMMITMENT TO REDUCE THE FOREIGN ROLE OVER TIME.

3. THE THREE KEY SECTORS WHICH HAVE RECEIVED THE STRONGEST GOVERNMENT SUPPORT ARE AGRICULTURE, SPACE AND NUCLEAR SCIENCE. THESE ARE ALL RELATED BOTH TO INDIA'S ECONOMIC
LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 02 NEW DE 05344 01 OF 03 061243Z

DEVELOPMENT AND TO INDIA'S DESIRE TO BE RECOGNIZED AS A MAJOR POWER, WITH SIGNIFICANT EXPERTISE IN AREAS CONSIDERED IMPORTANT TO THE DEVELOPED COUNTRIES.

4. VIRTUALLY ALL RESEARCH IN INDIA IS CARRIED OUT, DIRECTLY OR INDIRECTLY, BY THE GOVERNMENT. THE GOVERNMENT OF INDIA MAINTAINS THE KEY INSTITUTIONS IN SPACE,

NUCLEAR, AGRICULTURAL, AND DEFENSE RESEARCH, AND CONTROLS KEY MEDICAL RESEARCH INSTITUTIONS DIRECTLY OR INDIRECTLY. THE DEPARTMENT OF SCIENCE AND TECHNOLOGY TRIES TO FOSTER THE CONDUCT AND APPLICATION OF RESEARCH THROUGHOUT INDIA. THE GOVERNMENT INDIRECTLY CONTROLS THE UNIVERSITIES, INCLUDING THE 21 AGRICULTURAL UNIVERSITIES WHICH PLAY A KEY ROLE IN AGRICULTURAL RESEARCH, EDUCATION AND EXTENSION. RESEARCH CARRIED OUT IN TRULY PRIVATE ORGANIZATIONS IS INSIGNIFICANT.

4. THE GOVERNMENT PROVIDES FAIRLY EXTENSIVE FUNDING FOR SCIENTIFIC RESEARCH. THE BUDGET JUST PRESENTED FOR INDIAN FY 1978/79 INCLUDED APPROXIMATELY RS 1 BILLION (\$121 M) EACH IN RESEARCH FUNDS FOR THE DEPARTMENT OF SCIENCE AND TECHNOLOGY AND THE INDIAN COUNCIL OF AGRICULTURAL RESEARCH* RS 165 MILLION (\$20 M) FOR MEDICAL RESEARCH; RS 710 MILLION (\$86 M) FOR SPACE RESEARCH AND DEVELOPMENT; AND APPROXIMATELY RS 650 MILLION (\$78 M) FOR ATOMIC ENERGY RESEARCH AND DEVELOPMENT. INDIVIDUAL INVESTIGATORS IN THE UNIVERSITIES ARE STILL OFTEN STRAPPED FOR FUNDS, BUT FOR RESEARCHERS WITHIN THE DIRECTLY-CONTROLLED GOVERNMENT APPARATUS AND FOR THOSE OTHERS WHO CAN THREAD THEIR PROPOSALS THROUGH THE GOVERNMENT'S COMPLICATED APPROVAL PROCESS, AVAILABLE RUPEE FUNDS ARE QUITE GENEROUS.

LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 03 NEW DE 05344 01 OF 03 061243Z

5. AGRICULTURAL SCIENCE IS PERHAPS THE MOST ADVANCED FIELD IN INDIA. INDIAN SCIENTISTS AND INSTITUTIONS DO RESEARCH OF INTERNATIONAL CALIBER. THE RESEARCH IS ORIENTED TOWARDS INDIA'S PROBLEMS OF INCREASING FOOD PRODUCTION AND MAKING BETTER USE OF FISHERIES AND FOREST RESOURCES. CONSIDERABLE PROGRESS HAS BEEN MADE IN APPLYING THE FRUITS OF THIS RESEARCH TO THE FIELD, THOUGH A SIGNIFICANT GAP REMAINS TO BE OVERCOME.

6. IN OTHER FIELDS, INDIA HAS SCIENTISTS OF INTERNATIONAL CALIBER WHO ARE CLOSELY TIED IN WITH SCIENTISTS IN THE SAME FIELD IN OTHER COUNTRIES. RESEARCH INSTITUTIONS AS SUCH ARE SOMEWHAT WEAKER, HOWEVER, AND APPLICATION OF RESEARCH TO INDIA'S PROBLEM IS UNEVEN. IN THE MEDICAL AREA, CERTAIN KEY RESEARCH EFFORTS COULD YIELD TREMENDOUS BENEFITS TO THE HEALTH PROBLEMS OF INDIA AND OTHER DEVELOPING COUNTRIES (E.G. WORK ON AN ANTI-PREGNANCY VACCINE AND ON LEPROSY).

7. IN SPACE AND NUCLEAR RESEARCH, THE GOVERNMENT IS QUICK TO APPLY THE RESULTS OF RESEARCH WITHIN ITS OWN PROGRAMS (E.G. INDIAN DESIGNED NUCLEAR POWER STATIONS,

SATELLITE INSTRUCTIONAL TELEVISION AND REMOTE SENSING).
INDIA'S INDUSTRIAL AND MILITARY TECHNOLOGY BASE IS NOW
QUITE EXTENSIVE, ALTHOUGH THE PROBLEM OF MOVING NEW
DISCOVERIES FROM THE LABORATORY TO THE PRODUCTION
PROCESS REMAINS CONSIDERABLE.

8. ROLE OF FOREIGN COLLABORATION:

AMONG POLICYMAKERS AND SCIENTISTS, THERE IS A
BROAD CONSENSUS THAT INDIA MUST MINIMIZE ITS DEPENDENCE ON
EXTERNAL SOURCES IN SCIENCE AND INDUSTRY. AT THE POLICY LEVEL
ESPECIALLY, THERE IS A LONG-STANDING DISAGREEMENT BETWEEN THOSE
WHO BELIEVE THAT THIS REQUIRES INDIA TO DO VIRTUALLY ALL ITS
OWN R&D AND THOSE WHO BELIEVE IT CAN BE DONE BY EXPLOIT-
LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 04 NEW DE 05344 01 OF 03 061243Z

ING SUITABLE FOREIGN TECHNOLOGY. THE FORMER VIEWPOINT
IS ESPECIALLY PROMINENT IN THE NUCLEAR, ELECTRONICS AND
MEDICAL RESEARCH FIELDS, AND THE LATTER IN THE DEPARTMENT
OF SCIENCE AND TECHNOLOGY.

9. "WORKING-LEVEL" SCIENTISTS AND INDUSTRIAL USERS
OF TECHNOLOGY GENERALLY KNOW WHICH GAPS IN THEIR OWN
KNOWLEDGE OR TECHNOLOGY THEY WOULD LIKE TO FILL, AND ARE
EAGER TO IMPORT WHAT KNOWHOW THEY NEED TO DO THIS.
THEY ARE FAMILIAR WITH AND ABLE TO EVALUATE INTERNATIONAL
DEVELOPMENTS IN THEIR FIELDS, THOUGH WE DO GET REQUESTS
FOR INCREASED AVAILABILITY OF SCIENTIFIC JOURNALS.
HOWEVER, THE GOVERNMENT'S POLICIES ON SELF-RELIANCE
FREQUENTLY PREVENT INDUSTRIAL END-USERS FROM IMPORTING
TECHNOLOGY THEY FEEL THEY NEED. THIS HAPPENED RECENTLY
IN THE COMPUTER INDUSTRY; THE INDIAN GOAL OF DEVELOPING
A DOMESTIC COMPUTER INDUSTRY LED TO A DECISION ON IBM
WHICH WILL AT LEAST TEMPORARILY PENALIZE THE INDUSTRIES
SERVED BY COMPUTERS.

LIMITED OFFICIAL USE

NNN

LIMITED OFFICIAL USE

PAGE 01 NEW DE 05344 02 OF 03 071908Z
ACTION NEA-10

INFO OCT-01 ISO-00 NEAE-00 SS-15 SSO-00 ONY-00 /026 W

-----043873 071920Z /45 72

O 061134Z APR 78

FM AMEMBASSY NEW DELHI

TO SECSTATE WASHDC IMMEDIATE 723

LIMITED OFFICIAL USE SECTION 2 OF 3 NEW DELHI 5344

C O R R E C T E D C O P Y - T E X T (P A R A 1 4 .)

10. INDIA'S MOST EXTENSIVE INTERNATIONAL SCIENTIFIC COLLABORATION OVER THE LAST TWO DECADES HAS BEEN WITH THE US. THE US GOVERNMENT-SUPPORTED PROGRAM OF RUPEE-FUNDED US-INDIAN SCIENTIFIC COLLABORATION DATES BACK TO THE MID-50'S. DISBURSEMENTS ARE NOW ABOUT \$3.7 MILLION PER YEAR. UNDER THIS PROGRAM SEVERAL HUNDRED PROJECTS HAVE BEEN CARRIED OUT OVER THE PAST TWENTY YEARS, IN A BROAD RANGE OF FIELDS, ESPECIALLY AGRICULTURE, MEDICAL SCIENCE, AND PHYSICAL STANDARDS. IN THE FUTURE, ENERGY RESEARCH IS LIKELY TO BE INCREASINGLY IMPORTANT. AT THE MOMENT, THE PIPELINE OF NEW PROJECTS IS SMALL, REFLECTING THE VIRTUAL STANDSTILL FOR A COUPLE OF YEARS DURING MRS. GANDHI'S GOVERNMENT, BUT PROJECT PREPARATION WORK IS PICKING UP.

11. SINCE 1974, THE INDO-US JOINT COMMISSION, AND ESPECIALLY THE SUBCOMMISSIONS ON S&T AND ON ECONOMIC/ COMMERCIAL AFFAIRS, HAVE GIVEN THESE ACTIVITIES POLICY-LEVEL SANCTION. HOWEVER, SINCE THESE SUBCOMMISSIONS HAVE NEITHER A STAFF NOR A BUDGET, THIS HAS NOT AFFECTED THE BASIC MODUS OPERANDI OF THIS RELATIONSHIP, WHICH IS STILL THROUGH INDIVIDUAL AGENCY BUDGETS AND THE LABORIOUS CHANNELS SET UP BY THE GOI TO CLEAR PROJECTS INVOLVING INTERNATIONAL COLLABORATION. THE SUBCOMMISSIONS

LIMITED OFFICIAL USE

PAGE 02 NEW DE 05344 02 OF 03 071908Z

HAVE IDENTIFIED PRIORITY AREAS.

12. BECAUSE OF THE STRUCTURE OF INDIAN RESEARCH INSTITUTIONS, THE GOVERNMENT-SUPPORT PROGRAMS HAVE TENDED TO DOMINATE THE INDO-US SCIENTIFIC RESEARCH RELATIONSHIP. TRANSFERS OF APPLIED INDUSTRIAL TECHNOLOGY FROM US PRIVATE INDUSTRY HAVE TAKEN PLACE PARTICULARLY IN CHEMICALS, PHARMACEUTICALS, ELECTRONICS, COMMUNICATIONS AND OTHER HIGH TECHNOLOGY AREAS, THOUGH GOI POLICY HAS LIMITED THIS PROCESS.

13. INDIAN STUDENTS CONTINUE TO STUDY SCIENCE AND ENGINEERING IN THE US IN LARGE NUMBERS, AND THE US IS STILL IN GENERAL LOOKED ON AS THE BEST SOURCE OF FOREIGN SCIENTIFIC

TRAINING, ESPECIALLY IN AGRICULTURE AND HEALTH THE GOVERNMENT'S PROGRAMS FOR ENCOURAGING SCIENTIFIC STUDIES ABROAD NOW FOCUS MORE SELECTIVELY ON SPECIFIC ADVANCED SHORT-TERM TRAINING RATHER THAN GENERAL PROGRAMS OF STUDY, REFLECTING THE INCREASED COMPETENCE OF INDIAN UNIVERSITIES AND TECHNICAL INSTITUTES. INEVITABLY QUITE A FEW OF THE STUDENTS TRAINED IN THE US REMAIN THERE, BUT MANY OF THESE KEEP UP CLOSE TIES WITH THE INDIAN SCIENTIFIC COMMUNITY AND THIS CONTRIBUTE TO INDO-US SCIENTIFIC RELATIONS.

14. AMONG THE OTHER DEVELOPED COUNTRIES, INDIA'S MOST IMPORTANT SCIENTIFIC RELATIONS ARE THOSE WITH THE UK, FRANCE, THE FRG, JAPAN, SWEDEN AND THE USSR. GOVERNMENT SUPPORTED SCHEMES ARE ONCE AGAIN THE PRINCIPAL VEHICLE. THE FACT THAT THESE COUNTRIES SUPPORT FOREIGN EXCHANGE RATHER THAN JUST RUPEE COSTS HAS BEEN AN ADVANTAGE. THE UK HAS BEEN ACTIVE IN MANY FIELDS HERE. THE FRENCH AND TO A LESSER EXTENT THE GERMANS HAVE WORKED PRIMARILY LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 03 NEW DE 05344 02 OF 03 071908Z

IN FIELDS WHERE THE US AND USSR HAVE BEEN RELUCTANT TO BECOME TOO INVOLVED, SUCH AS NUCLEAR AND SPACE TECHNOLOGY. THE USSR HAS A SCIENTIFIC COOPERATION AGREEMENT BUT RESEARCH COLLABORATION WITH SOVIET SCIENTISTS IS NOT POPULAR IN THE INDIAN SCIENTIFIC COMMUNITY BECAUSE OF POOR FOLLOW-UP BY THE RUSSIAN COLLABORATORS, RESTRICTIONS ON VISITS BACK AND FORTH, AND A GENERAL LACK OF FREE EXCHANGE OF INFORMATION WITH THE RUSSIANS. RUSSIAN COLLABORATION HAS CONCENTRATED ON A FEW HIGHLY VISIBLE TECHNICAL AND SCIENTIFIC PROJECTS IN HIGH TECHNOLOGY AREAS, SUCH AS METALLURGICAL INDUSTRIES, PRODUCTION OF MILITARY AIRCRAFT, A MAGNETO-HYDRODYNAMICS PILOT PLANT, AND LAUNCH OF SPACECRAFT. UNDP AND WHO HAVE PROVIDED RESEARCH FUNDS AS WELL AS EXPERTS CONSULTANTS AND TRAINING IN SPECIALIZED FIELDS OF INTEREST TO THE GOI. THE WORLD BANK IS CONSIDERING A LOAN TO SUPPORT AND EXPAND THE RESEARCH ACTIVITIES OF THE AGRICULTURAL UNIVERSITIES IN INDIA.

15. INDIA IS VERY INTERESTED IN BECOMING A LEADING SCIENTIFIC CENTER FOR THE DEVELOPING WORLD. IT HAS EXPANDED ITS SCIENTIFIC AND INDUSTRIAL ACTIVITIES IN THE MIDDLE EAST AND SOUTHEAST ASIA AND HAS SIGNED A NUMBER OF AGREEMENTS ON COOPERATION IN SCIENCE AND TECHNOLOGY. IRAN IS MAKING A PARTICULAR EFFORT TO USE INDIAN SCIENTIFIC KNOWHOW AND MANPOWER. IN RECOGNITION OF THIS ROLE THE UN HAS IDENTIFIED SEVERAL INDIAN INSTITUTIONS AS REGIONAL CENTERS FOR THE TRAINING OF SCIENTISTS AND ENGINEERS FROM DEVELOPING COUNTRIES.

16. OPPORTUNITIES FOR US POLICY:

A. BILATERAL: GIVEN THE SIZE AND COMPETENCE OF INDIA'S SCIENTIFIC ESTABLISHMENT A MORE EFFECTIVE COLLABORATIVE RELATIONSHIP BETWEEN INDIA AND THE US IN THIS AREA CAN PROVIDE BENEFITS IN STRICTLY SCIENTIFIC TERMS TO LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 04 NEW DE 05344 02 OF 03 071908Z

BOTH SIDES. TO THE EXTENT THAT THE RELATIONSHIP IS ONE OF GENUINE COLLABORATION, RATHER THAN ONE IN WHICH THE US IS THE DONOR AND INDIA SIMPLY THE RECIPIENT OF ASSISTANCE, INCREASING TIES IN THIS AREA CAN SUPPORT IMPROVED BILATERAL RELATIONS BY DEMONSTRATING THAT THE US TAKES INDIA SERIOUSLY. SPECIFIC MEASURES WHICH WE BELIEVE WOULD HELP FOSTER THESE TIES INCLUDE:

LIMITED OFFICIAL USE

NNN

LIMITED OFFICIAL USE

PAGE 01 NEW DE 05344 03 OF 03 061310Z
ACTION NEA-10

INFO OCT-01 ISO-00 NEAE-00 SS-15 SSO-00 ONY-00 /026 W
-----016939 061349Z /72R
O 061134Z APR 78
FM AMEMBASSY NEW DELHI
TO SECSTATE WASHDC IMMEDIATE 724

LIMITED OFFICIAL USE SECTION 3 OF 3 NEW DELHI 5344

A. THE JOINT COMMISSION: THE SUBCOMMISSIONS, ESPECIALLY THE ONE ON SCIENCE AND TECHNOLOGY, BADLY NEED A DOLLAR BUDGET. LIMITING OURSELVES TO RUPEE-FUNDED RESEARCH CUTS OUT USEFUL ACTIVITIES, BESIDES RAISING UNFORTUNATE MEMORIES OF THE RUPEE ISSUE. THE AID S&T GRANT NOW UNDER CONSIDERATION SHOULD SOMEWHAT ALLEVIATE THIS PROBLEM, THOUGH WE WILL HAVE TO TAKE CARE NOT TO LET A DONOR/DONEE RELATIONSHIP AFFECT THE ACTUAL RESEARCH IT FUNDS. MUCH MORE COULD BE EFFECTIVELY USED. WILLINGNESS OF SOME OF THE USG AGENCIES LIKE THE DEPARTMENT OF ENERGY AND NIH TO USE SOME DOLLAR FUNDS WOULD ALSO

GREATLY INCREASE THE EFFECTIVENESS OF THE PROGRAM, SINCE AID-FUNDED PROJECTS HAVE CERTAIN RESTRICTIONS ARISING OUT OF AID'S MANDATE. THE JOINT NATURE OF THE SUB-COMMISSIONS IS USEFUL IN UNDERLINING THE COLLABORATIVE NATURE OF THE RESEARCH TO BE UNDERTAKEN.

B. CLEARANCES: CLEARANCE PROCEDURES ON BOTH SIDES ARE A BIG STUMBLING BLOCK. ON THE GOI SIDE, A BUDGET CONTROLLED BY THE SUBCOMMISSIONS COULD HELP SHORTEN THIS PROCESS FOR CERTAIN PROJECTS. ON THE US SIDE, THE MAIN PROBLEM IS COMPETITION WITH US DOMESTIC RESEARCH. WHILE WE REALIZE THIS IS UNAVOIDABLE FOR DOLLAR-FUNDED PROJECTS, WE BELIEVE IT SHOULD NOT BE NECESSARY FOR PROJECTS FUNDED OUT OF SPECIAL FOREIGN CURRENCY FUNDS.

LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 02 NEW DE 05344 03 OF 03 061310Z

C. EXCHANGES: THE MANY INDIANS WHO HAVE STUDIED IN THE US AND RETAIN A PROFESSIONAL ORIENTATION TO THE US ARE AN ASSET WELL WORTH PERPETUATING IN OUR BILATERAL RELATIONS. THERE IS A CONSIDERABLE MARKET FOR INCREASED EXCHANGES OF PERSONNEL IN CERTAIN SCIENTIFIC FIELDS. THE NSF-CSIR EXCHANGE OF SCIENTISTS PROGRAM IS VALUABLE. WE COULD USE EFFECTIVELY A SIMILAR PROGRAM IN THE MEDICAL AND AGRICULTURAL AREAS, TO PROMOTE EXCHANGES OF SCIENTISTS IN CERTAIN CAREFULLY SELECTED SPECIALITIES. THIS IS SOMETHING THE CONCERNED MINISTRIES IN THE GOI HAVE INQUIRED ABOUT. WE SUPPORT THE CONTINUED INTEREST OF THE SUB-COMMISSION ON EDUCATION AND CULTURE IN EXPANDING EXCHANGES UNDER THE INDO-AMERICAN FELLOWSHIP PROGRAM. THESE HAVE BEEN CONCENTRATED IN SCIENCE AND TECHNOLOGY.

D. SCIENTIFIC PUBLICATIONS: ALTHOUGH THE KEY GOVERNMENT INSTITUTIONS AND LIBRARIES HAVE EXTENSIVE COLLECTIONS OF JOURNALS AND THE KEY SCIENTISTS DO WORK AT KEEPING ABREAST OF INTERNATIONAL DEVELOPMENTS IN THEIR FIELDS, WE CONSTANTLY HEAR THAT BROADER ACCESS TO US SCIENTIFIC JOURNALS WOULD BE OF TREMENDOUS BENEFIT.

E. RELATIONS BETWEEN UNIVERSITIES: IT IS DIFFICULT FOR UNIVERSITIES IN INDIA TO HAVE INDEPENDENT RELATIONS WITH FOREIGN UNIVERSITIES BECAUSE THEY MUST HAVE GOI CLEARANCE FOR ANYTHING INVOLVING FOREIGN FUNDS. HOWEVER, WE FEEL THAT THESE WOULD BE SO BENEFICIAL THAT IT IS WORTH SOME EFFORT TO FIND WAYS IN WHICH THESE COULD BE DEVELOPED, IN A MORE FOCUSED FASHION THAN THE INSTITUTIONAL DEVELOPMENT PROGRAMS OF THE 1960S. TWO POSSIBLE VEHICLES FOR THIS ARE TITLE XII OF THE FOREIGN ASSISTANCE ACT, IN THE AGRICULTURAL AREA, AND THE SEMINARS HELD

LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 03 NEW DE 05344 03 OF 03 061310Z

UNDER THE EDUCATION AND CULTURE SUBCOMMISSION.

II. APPLIATION TO THE PROBLEMS OF THE DEVELOPING WORLD: IN ORDER TO USE US-INDIAN SCIENTIFIC TIES EFFECTIVELY TO SEARCH FOR APPROACHES TO THE PROBLEMS OF THE DEVELOPING WORLD, WE SHOULD CONCENTRATE HEAVILY ON TWO AREAS WHICH ARE CRITICAL TO THE DEVELOPING WORLD, WHICH CAN READILY ABSORB ADDITIONAL RESOURCES, AND WHICH CAN BENEFIT BY US-INDIAN COLLABORATION; AGRICULTURAL RESEARCH, INCLUDING FISHERIES AND FORSTRY, AND ALTERNATIVE ENERGY SOURCES. WE SHOULD BE PREPARED TO FUND AN EXPANDED PROGRAM IN THESE AREAS. WE UNDERSTAND THERE IS INDIAN INTEREST IN PROPOSING A SEPARATE SUBCOMMISSION ON AGRICULTURE, AND WOULD SUPPORT IT. WE ALSO HOPE TWO PENDING SOLAR ENERGY RESEARCH PROPOSALS WILL BE IMPLEMENTED RAPIDLY. WE SHOULD ALSO GIVE SOME EMPHASIS TO APPLIED RESEARCH AND THE ULTIMATE APPLIATION OF NEW TECHNOLOGIES TO THE DEVELOPING COUNTRIES.

THE BILATERAL PROGRAM AS IT NOW EXISTS, PREFERABLY AS MODIFIED BY OUR SUGGESTIONS ABOVE, COULD BE USED TO SUPPORT RESEARCH WITH A BROADER LDC ORIENTATION. ADDITIONAL MEASURES TO DISSEMINATE ITS RESULTS AMONG LDCS, TO PUBLICIZE THE US ROLE AND TO ENCOURAGE PILOT PROJECTS IN INDIA AND OTHER LDCS WOULD BE USEFUL ADJUNCTS.

GOHEEN

LIMITED OFFICIAL USE

NNN

Message Attributes

Automatic Decaptioning: Z
Capture Date: 01 jan 1994
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: PAPERS, TECHNICAL ASSISTANCE, SCIENTIFIC COOPERATION, RESEARCH, PROGRAMS (PROJECTS)
Control Number: n/a
Copy: SINGLE
Draft Date: 06 apr 1978
Decaption Date: 20 Mar 2014
Decaption Note: 25 YEAR REVIEW
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 20 Mar 2014
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1978NEWDE05344
Document Source: CORE
Document Unique ID: 00
Drafter: n/a
Enclosure: n/a
Executive Order: N/A
Errors: N/A
Expiration:
Film Number: D780148-1139
Format: TEL
From: NEW DELHI
Handling Restrictions:
Image Path:
ISecure: 1
Legacy Key: link1978/newtext/t19780486/aaaacupk.tel
Line Count: 419
Litigation Code IDs:
Litigation Codes:
Litigation History:
Locator: TEXT ON-LINE, ON MICROFILM
Message ID: 6b8b5cb5-c288-dd11-92da-001cc4696bcc
Office: ACTION NEA
Original Classification: LIMITED OFFICIAL USE
Original Handling Restrictions: ONLY
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 8
Previous Channel Indicators: n/a
Previous Classification: LIMITED OFFICIAL USE
Previous Handling Restrictions: ONLY
Reference: 78 STATE 83372
Retention: 0
Review Action: RELEASED, APPROVED
Review Content Flags:
Review Date: 05 may 2005
Review Event:
Review Exemptions: n/a
Review Media Identifier:
Review Release Date: N/A
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
SAS ID: 3054778
Secure: OPEN
Status: NATIVE
Subject: COUNTRY PAPER ON SCIENCE AND TECHNOLOGY IN INDIA
TAGS: TECH, TBIO, TPHY, TATT, IN
To: STATE
Type: TE
vdkgvwkey: odhc://SAS/SAS.dbo.SAS_Docs/6b8b5cb5-c288-dd11-92da-001cc4696bcc
Review Markings:
Sheryl P. Walter
Declassified/Released
US Department of State
EO Systematic Review
20 Mar 2014
Markings: Sheryl P. Walter Declassified/Released US Department of State EO Systematic Review 20 Mar 2014